According to the invention, a pore diameter of at least about 80 nm, in combination with the recited particle diameter and pore volume, is preferred since a particulate carrier with a pore diameter substantially less than 80 nm is less efficient at adsorbing target nucleic acids to its surface due to the influence of impurities in the sample.

Uematsu et al. (U.S. Patent No. 5,945,525) discloses magnetic silica particles with a specific surface area of 100 to 800 m^2, which are used for nonspecifically adsorbing a large amount of nucleic acids. According to Uematsu et al., the magnetic silica particles have a pore diameter of 0.1 to 60 nm (column 5, lines 62-65). Uematsu explains that this range of pore diameter is significant because the larger the surface pore diameter is, the larger are the specific surface area and the pore diameter. Uematsu explains further that while more nucleic acids are absorbed, specific surface area increases; and collected nucleic acids decrease as pore volume increases. In view of these competing considerations, Uematsu teaches using a pore diameter of 0.1 to 60 nm as allowing the collection of a "remarkably large amount of nucleic acid" (see column 6, lines 5-13).

In contrast, the particle carrier for use in the invention of Claim 1 has a pore diameter of 80 to 250 nm. Uematsu et al. neither discloses nor suggests the specific pore diameter according to the invention of Claim 1 nor the results achieved by employing the pore diameter. Therefore, the invention of Claim 1 is novel and unobvious over Uematsu et al.

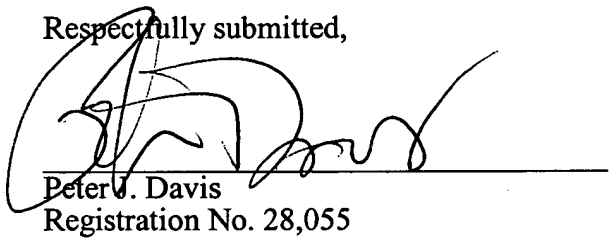
Since Claims 2 to 21 depend from claim 1, the inventions of claims 2 to 21 are also novel and unobvious over Uematsu et al.

This application is considered to be in a condition for immediate allowance, and Applicant requests early notification of the same.

In the event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing 472552000100. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Date: April 12, 2002

Respectfully submitted,

By: 

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VERSIONS WITH MARKINGS TO SHOW CHANGES MADE

For the convenience of the Examiner, the changes made are shown below with deleted text in strikethrough and added text in underline.

IN THE CLAIMS

1. (Amended) A method of extracting nucleic acids from a material containing nucleic acids using a nucleic acid-binding particulate carrier, ~~wherein the particulate carrier has a particle diameter of 0.5 to 15.0 μm, a pore diameter of 50 to 500 nm and a pore volume of 200 to 5000 mm^3/g~~ the method comprising the steps of:

(a) mixing the material containing nucleic acids, a nucleic acid-binding particulate carrier having a particle diameter of 0.5 to 15.0 μm, a pore diameter of 80 to 250 nm and a pore volume of 0.2 to 5 ml/g, and a nucleic acid extraction solution for allowing the nucleic acids to adsorb to the particulate carrier, to thereby bind the nucleic acids to the particulate carrier;

(b) separating a composite of the nucleic acids and the particulate carrier from the mixture obtained in Step (a) to remove contaminants; and

(c) eluting and collecting the nucleic acids from the composite of the nucleic acids and the particulate carrier.

9. (Amended) A method according to Claim 1 wherein the nucleic acids are at least one member selected from the group consisting of DNA ~~and/or~~ and RNA.

14. (Amended) A method according to Claim 12 wherein the choatropic substance is at least one member selected from the group consisting of guanidine thiocyanate ~~and/or~~ and guanidine hydrochloride.